REMARKS

The Official Action of 6 October 2005 has been carefully considered and reconsideration of the application as amended is respectfully requested.

With reference to paragraph 1 of the Official Action, wherein the Examiner states that Applicants have not filed certified copies of their Japanese priority applications, Applicants respectfully note that they filed the certified copies in May 2004 as evidenced by the attached copy of postcard receipt which has been stamped as received by the USPTO on 19 May 2005. Acknowledgment of receipt of the certified copies is respectfully requested.

Claims 7, 11 and 16 have been amended in the manner courteously suggested by the Examiner whereby to remove the bases for the objections appearing in paragraph 2 of the Official Action.

Claim 1 has been amended to remove the bases for the rejections over the art cited at paragraphs 4-6, 9-14, 16 and 17 of the Official Action. The claim as amended requires that the claimed ink composition comprises a copolymer that contains both structural units originating in a C_5 or higher diene compound **and** structural units originating in a non-diene compound. The art cited in the aforementioned paragraphs do not show or suggest an ink composition comprising a copolymer that contains **both** structural units originating in an aromatic compound monomer and structural units originating in a C_5 or higher diene compound. Accordingly, it is respectfully submitted that the subject rejections should be withdrawn in view of the amendment to the claims.

Claims 1-18 stand rejected under 35 USC 103(a) as allegedly being

unpatentable over Segawa et al (paragraph 18 of the Official Action). Applicants respectfully traverse this rejection under the provisions of 35 USC 103(c) on the basis of common ownership, and to this effect the undersigned states on behalf of Applicants:

The present application and Segawa et al US application publication US 2004/0024086 were, at the time the invention of the present application was made, owned by the same entity, namely Seiko Epson Corporation.

Claims 1-6 and 12-18 stand rejected under 35 USC 103(a) as allegedly being unpatentable over EP 1203797. Applicants respectfully traverse this rejection.

The claimed invention is based at least in part on Applicants' discovery that the gas resistance and other properties of an ink composition can be improved by including in the ink composition a copolymer having a sulfonic acid group produced by copolymerizing an aromatic compound monomer and a C_5 or higher diene compound and/or non-diene compound (specification at page 2, last paragraph). This is shown by the evidence of record in the specification, which describes evaluations for a number of different characteristics (specification at page 26, last paragraph to page 29, second paragraph) that were performed on the ink compositions of Examples 1-2 and Comparative Examples 1-3 (specification at pages 25-26). As can be seen on pages 25-26, the ink composition of Comparative Example 3 differs from the ink composition of Example 1 only insofar as, in the ink composition of this comparative example, emulsion 5 was substituted for emulsion 1. As shown in Table 1 on page 25 of the specification, emulsion 1 comprises isoprene (C_5 diene) wherein emulsion 5 comprises butadiene (C_4 diene).

As shown by the results of the experimentation described in Table 2 on page 29 of the specification, the ink composition of Example 1 performed better than the ink

composition of Comparative Example 3 in each of the evaluations for gas resistance, abrasion resistance and scratch resistance. This shows that the claimed ink composition comprising the recited C_5 diene has advantageous properties as compared with an ink composition comprising a C_4 diene with the styrene (aromatic compound) present in the same (claimed) amount.

Accordingly, the evidence of record shows (a) that the number of carbon atoms in the recited diene is a result effective variable and (b) the criticality of including the recited diene in the claimed ink composition. In contrast, the Examiner has acknowledged on page 11 of the Official Action that "there is no disclosure in the (prior art) example that the diene is C_5 or higher diene", and that "EP 1203797 discloses equivalence and interchangeability of using C_4 diene with C_5-C_{10} diene".

Since the cited art does not teach the result effective nature of the claimed variable (the number of carbon atoms in the recited diene), it is respectfully submitted that the reference cannot set forth even a *prima facie* case of obviousness for the invention as claimed. See MPEP Section 2144.05 ("A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977)"). Moreover, even assuming for the sake of argument that the cited art could set forth a *prima facie* case of obviousness, it is respectfully submitted that the evidence of record in the specification, as discussed above, would be unexpected and sufficient to rebut the alleged *prima facie* case. See MPEP Section 2144.05(III).

In view of the above, it is respectfully submitted that all rejections and

objections of record have been overcome and that the application is now in allowable form.

An early notice of allowance is earnestly solicited and is believed to be fully warranted.

Respectfully submitted,

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